

**ENHANCED LOW PASS FILTER****ABSTRACT OF THE DISCLOSURE**

An ADSL POTS splitter includes an enhanced low pass filter. The enhanced low pass filter includes a first filter capacitor, a first non-isolated inductor, a second non-isolated inductor, a first isolated inductor and a common mode choke. The second non-isolated inductor is connected to the first non-isolated inductor. A first winding of the second non-isolated inductor is connected in series with a first winding of the first non-isolated inductor. A second winding of the second non-isolated inductor connected in series with a second winding of the first non-isolated inductor. The first isolated inductor is connected to the first non-isolated inductor with a first winding of the first isolated inductor connected in series with the first winding of the first non-isolated inductor and to a first lead of the first filter capacitor. A second winding of the first isolated inductor connected in series with the second winding of the first non-isolated inductor and to a second lead of the first filter capacitor. The first non-isolated inductor has a respective DC saturation current and the isolated inductor has a respective DC saturation current. The DC saturation current of the first non-isolated inductor is substantially greater than the DC saturation current of the isolated inductor for achieving higher inductance in the isolated inductor. The common mode choke is connected between the first non-isolated inductor and the first filter capacitor. A first winding of the common mode choke connected in series with the first winding of the first non-isolated inductor and with the first winding of the first isolated inductor. A second winding of the common mode choke is connected in series with the second winding of the first non-isolated inductor and with the second winding of the first isolated inductor.